

In the Matter of)
)
2006 Biennial Regulatory Review --) IB Docket No. 06-154
Revision of Part 25)

1551

in Part 25, and eliminating redundant language in several sections of Part 25.

3. Furthermore, the Commission has regularly taken action to update or revise its satellite and earth station licensing rules when warranted.⁵ Consistent with our continuing efforts to streamline our rules where appropriate, we take this opportunity to clarify certain requirements in the Part 25 rules. Specifically, we propose to add definitions for several terms that are undefined in Part 25 and revise imprecise or awkward language in some rules. Other proposed rule revisions would update cross-references to Commission rules or regulations or recommendations of the International Telecommunication Union (ITU) and correct grammatical, spelling, and typographical errors. Modifying or eliminating the rules proposed in this NPRM will ease the burden on applicants and licensees by making Part 25 easier to understand, which in turn, will expedite the licensing of earth and space stations.

III. DISCUSSION

4. We propose a number of revisions to Part 25 to eliminate provisions that are no longer needed. For example, we propose to amend Section 25.201, which defines technical terms for purposes of Part 25, by deleting definitions of terms that do not appear anywhere else in Part 25.⁶ We also propose to amend several rule provisions in order to eliminate redundant or superfluous text. For example, Section 25.110(c) of the Commission's rules⁷ sets forth minimum information requirements for all correspondence with the Commission's rules, including the station location and the service provided. This information is not needed because it can be obtained from our records with the station's call sign. Similarly, Section 25.134(d) is not needed because it repeats the requirement in Section 25.115 that all applications for transmitting earth station licenses must be filed on Form 312.⁸ We set forth a number of similar proposals in the Appendix.⁹

5. In addition to eliminating rules that are no longer needed, we seek to clarify a number of provisions in Part 25 to make those requirements easier for applicants and licensees to understand. For example, we propose to add definitions for several terms that are currently undefined in Part 25. Specifically, we propose to add definitions of the terms “feeder link,” “mobile earth terminal,” and “1.5/1.6 GHz Mobile Satellite Service.”¹⁰ In addition, we seek

⁵ Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed Satellite s at Reduced Orbital Spacing and to Revise Application Processing Procedures for Satellite Communications Services, *First Report and Order*, CC Docket No. 86-496, 6 FCC Rcd 2806 (1991) (*1991 Streamlining Order*); Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, *Report and Order*, IB Docket No. 95-117, 11 FCC Rcd 21581 (1996) (*1996 Streamlining Order*); 2000 Biennial Regulatory Review -- Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations, *Fifth Report and Order*, IB Docket No. 00-248, 20 FCC Rcd 5666 (2005) (*Part 25 Earth Station Streamlining Fifth Report and Order*).

⁶ For instance, we propose to delete definitions for “active satellite” and “passive satellite.”

⁷ 47 C.F.R. § 25.110(c).

⁸ See 47 C.F.R. §§ 25.134(d), 25.115(a)(1).

⁹ See, e.g., proposed revisions to 47 C.F.R. §§ 25.110(c); 25.113(a); 25.134(d) and (h); 25.143(e)(1)(iii); 25.146; 25.150; 25.210(d) and (f); 25.212; 25.272(a); 25.274(b); and 25.276(c) in Appendix A.

¹⁰ See, e.g., 47 C.F.R. §§ 25.156(d)(4) (use of the term “feeder link”), 25.133 (use of the term “mobile earth terminal”), 25.136 (use of the term “1.5/1.6 Mobile Satellite Service”).

comment on proposed language that will clarify a number of definitions currently in Section 25.201.¹¹ We also propose revisions to clarify the rules for non-routine earth station applications and other applications.¹² Finally, we propose clarifying the rules for Earth Stations on Vessels (ESVs) and Vehicle-Mounted Earth Stations (VMESs) by adding cross-references to Section 25.132(b).¹³

6. Further, we propose to revise certain Part 25 rules to make the requirements more precise. For example, Section 25.115(a)(2) of the Commission's rules, listing earth station application requirements, refers to "transmitting" earth stations. This language could be misunderstood to exclude transmit/receive earth stations. In this and other similar cases, we invite comment on making rule language more precise without changing the substantive requirements of the rules.¹⁴ There is also language in a number of rules that is awkward or otherwise difficult to read. In one case, the rules specifying when coordination is required with satellites operated by the National Oceanic and Atmospheric Administration (NOAA) and the Department of Defense (DoD) are long and complex.¹⁵ We propose to clarify the language in these provisions and to divide them into subsections so that the coordination requirements are easier to understand.¹⁶ We also propose to rearrange the text of other rules to make them easier for licensees to read and apply.¹⁷

7. Moreover, several provisions in Part 25 have become outdated, such as cross-references to other rules in Part 25 that have been deleted or redesignated, or references to outdated Commission contact information.¹⁸ Other Part 25 rules refer to ITU recommendations that have been superseded by more recent recommendations.¹⁹ Further, some Part 25 provisions refer to ITU regulations that have since been redesignated.²⁰ We propose to amend these rule

¹¹ See proposed revisions to definitions of "fixed earth station," "Fixed Satellite Service," "Mobile Satellite Service," "power spectral density," "power flux density," "protection areas," and "routine processing or licensing" in Appendix A.

¹² See proposed revisions to 47 C.F.R. §§ 25.211, 25.212, 25.218, and 25.220 in Appendix A.

¹³ See proposed revisions to 47 C.F.R. §§ 25.221, 25.222, and 25.226 in Appendix A.

¹⁴ See proposed revisions to 47 C.F.R. §§ 25.115(a)(2) (proposing to change "transmit" to "operate", because the frequency bands listed include both transmit and receive bands); 25.142(b)(2)(ii) (proposing to change "grant of construction authorization" to "grant of operating authority" to be consistent with elimination of construction authorization requirement); 25.145(c)(1) and 25.146(i)(2) (proposing to specify North and South Latitude in geographic coverage requirements); and 25.148(b) (proposing to replace "satellite station" with "space station") in Appendix A.

¹⁵ See Sections 25.259 and 25.260 of the Commission's rules, 47 C.F.R. §§ 25.259, 25.260.

¹⁶ See proposed revisions to 47 C.F.R. §§ 25.259 and 25.260 in Appendix A.

¹⁷ See proposed revisions to 47 C.F.R. §§ 25.117 and 25.272(a) in Appendix A.

¹⁸ See proposed revisions to 47 C.F.R. §§ 25.109, 25.140(a), 25.146(e), 25.203(g)(2) and (g)(4) in Appendix A. See also proposed revision of Section 25.276(c) (replacing cite to Commission Order with cross-reference to rule section).

¹⁹ See proposed revisions to 47 C.F.R. §§ 25.146(a)(1)(i) and (iii), 25.146(a)(2)(i) and (iii), 25.146(b)(1)(i) and (iii), and 25.146(i)(3) in Appendix A. See also proposed revisions to 47 C.F.R. § 25.115(a)(3) in Appendix A (filing requirement made obsolete by Form 312EZ).

²⁰ Specifically, at one time, the ITU included the letter "S" in the designations for all the ITU Radio Regulations, but the ITU no longer uses the "S" numbering system. See proposed revisions to 47 C.F.R. §§ 25.146(e) and 25.251(b) in Appendix A.

provisions to delete or correct all the outdated information and cross-references in Part 25 and to update all cross-references. We also propose changes in a number of rule provisions to correct grammatical, spelling, or typographical errors.²¹ Proposed corrections to cross-references and other similar revisions are set forth in the Appendix.

IV. CONCLUSION

8. We invite comment on our proposals. We also invite commenters to make additional proposals and suggestions for streamlining and clarifying the Part 25 rules. This is a part of our ongoing, continuing effort to streamline the Part 25 rules and reduce the administrative burdens for satellite applicants. We anticipate proposing further changes to Part 25, both substantive and non-substantive, in future rulemakings in this docket.

V. PROCEDURAL MATTERS

A. Ex Parte

9. This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²² Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented is generally required.²³ Other rules pertaining to oral and written presentations are set forth in Section 1.1206(b) of the Commission’s rules.

B. Initial Regulatory Flexibility Act Certification

10. The Regulatory Flexibility Act of 1980, as amended (RFA)²⁴ requires that a regulatory flexibility analysis be prepared for rulemaking proceedings unless the agency certifies that “the rule will not have a significant economic impact on a substantial number of small entities.”²⁵ The RFA generally defines the term “small entity” as referring to any “small business,” “small organization,” or “small governmental jurisdiction.”²⁶ The term “small business” has the same meaning as the term “small business concern” under the Small Business Act.²⁷ A small business concern is one which: (1) is independently owned and operated; (2) is

²¹ See proposed revisions to 47 C.F.R. §§ 25.109(c), 25.116(e), 25.119(b)(2), 25.134, 25.208(s), 25.209(h), 25.214(a)(2), 25.220(a)(1), 25.271(c)(1), and 25.271(c)(3) in Appendix A.

²² 47 C.F.R. §§ 1.1200, 1.1206; Amendment of 47 C.F.R. § 1.1200 *et seq.* Concerning *Ex Parte* Presentations in Commission Proceedings, *Report and Order*, GC Docket No. 95-21, 12 FCC Rcd 7348 (1997).

²³ 47 C.F.R. § 1.1206(b)(2).

²⁴ The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

²⁵ 5 U.S.C. § 605(b).

²⁶ *Id.* § 601(6).

²⁷ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after the opportunity

not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).²⁸ A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”²⁹ “Small governmental jurisdiction” generally means governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000.³⁰

11. In this *NPRM*, the Commission proposes to amend various provisions of its rules pertaining to the licensing and/or operation of radio stations used for telecommunication via satellite. The objectives of the proposed rule changes are to make the rules in question more concise, more coherent, and/or more lucid without changing or eliminating existing regulatory requirements. We certify that adoption of these proposed rule changes would not have a significant economic impact on a substantial number of small entities.

12. The Commission will send a copy of the *NPRM*, including a copy of this certification, in a report to Congress pursuant to the Congressional Review Act.³¹ In addition, the *NPRM* and this certification will be sent to the Chief Counsel for Advocacy of the Small Business Administration, and will be published in the Federal Register.³²

C. Initial Paperwork Reduction Analysis

13. This *NPRM* does not propose new or modified information collection requirements.

D. Filing of Comments and Reply Comments

14. Pursuant to sections 1.415 and 1.419 of the Commission’s rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. When filing comments or reply comments, please reference **IB Docket No. 06-154**. Comments may be filed using: (1) the Commission’s Electronic Comment Filing System (ECFS), (2) the Federal Government’s eRulemaking Portal, or (3) by filing paper copies. See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments.
- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or

for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” 5 U.S.C. § 601(3).

²⁸ Small Business Act, 15 U.S.C. § 632 (1996).

²⁹ 5 U.S.C. § 601(4).

³⁰ 5 U.S.C. § 601(5).

³¹ 5 U.S.C. § 801(a)(1)(A).

³² See 5 U.S.C. § 605(b).

rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th Street, SW, Room TW-A325, Washington, DC 20554. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

15. People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at 202-418-0530 (voice) or 202-418-0432 (TTY). Contact the FCC to request reasonable accommodations for filing comments (accessible format documents, sign language interpreters, CART, etc.) by e-mail at: FCC504@fcc.gov; phone: 202-418-0530 or TTY: 202-418-0432.

VI. ORDERING CLAUSES

16. Accordingly, IT IS ORDERED, pursuant to Sections 4(i), 7(a), 11, 303(c), 303(f), 303(g), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a), 161, 303(c), 303(f), 303(g), 303(r), that this Notice of Proposed Rulemaking in IB Docket No. 06-154 is hereby ADOPTED.

17. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center shall send a copy of this Notice of Proposed Rulemaking, including the initial regulatory flexibility act certification, to the Chief Counsel for Advocacy of the Small Business Administration, in accordance with Section 603(a) of the Regulatory Flexibility Act, 5 U.S.C. § 601, et seq. (1981).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX

Proposed Rule Changes

The Federal Communications Commission proposes to amend title 47 of the Code of Federal Regulations, part 25, as follows:

PART 25 -- SATELLITE COMMUNICATIONS

1. The authority citation for Part 25 continues to read as follows:

Authority: 47 U.S.C. 701-744. Interprets or applies Sections 4, 301, 302, 303, 307, 309, and 332 of the Communications Act, as amended, 47 U.S.C. Sections 154, 301, 302, 303, 307, 309, 332, unless otherwise noted.

§ 25.103 [amended]

2. In § 25.103, remove and reserve paragraphs (a) through (f).

3. Revise § 25.109 to read as follows:

§ 25.109 Cross-reference.

- (a) Space radiocommunications stations in the following services are not licensed under this part:

(1) For licensing requirements for the Amateur Satellite Service, see part 97, but Amateur Satellite Operators must comply with § 25.111(b) of this part;

(2) Ship earth stations in the Maritime Mobile Satellite Service, see 47 CFR part 80;

(3) Aircraft earth stations in the Aeronautical Mobile Satellite Service, see 47 CFR part 87.

(b) All space station and earth station operators must comply with the applicable provisions of the Table of Frequency Allocations, in § 2.106 of the Commission's rules, 47 C.F.R. § 2.106.

(c) All earth station operators must comply with the applicable provisions of part 1, subpart I of the Commission's rules, 47 C.F.R. §§ 1.1301, *et seq.*

(d) All earth station operators must comply with the applicable provisions of part 17 of the Commission's rules, 47 C.F.R. part 17.

4. In § 25.110, revise paragraphs (a) and (c) to read as follows:

§ 25.110 Filing of applications, fees, and number of copies.

(a) Applications shall be filed by going online at www.fcc.gov/ibfs and submitting the application through the International Bureau Filing System (IBFS).

* * * * *

- (c) All correspondence concerning any application must identify

(1) the applicant's name,

(2) the call sign of the space station or earth station, and

(3) the file number of the application.

* * * * *

5. In § 25.111, revise paragraph (c) to read as follows:

§ 25.111 Additional information.

* * * * *

(c) In the Direct Broadcast Satellite service, applicants and licensees shall also provide the Commission with all information it requires in order to modify the plans for the Broadcasting-Satellite Service (BSS) in Appendix 30 of the ITU Radio Regulations (RR) and associated feeder-link plans in Appendix 30A of the ITU Radio Regulations (RR), if the system has technical characteristics differing from those specified in the Appendix 30 BSS Plans, the Appendix 30A feederlink Plans, Annex 5 to Appendix 30, or Annex 3 to Appendix 30A. For such systems, no protection from interference caused by radio stations authorized by other Administrations is guaranteed until the agreement of all affected Administrations is obtained and the frequency assignment becomes a part of the appropriate Region 2 BSS and feeder-link Plans. Authorizations for which coordination is not completed and/or for which the necessary agreements under Appendices 30 and 30A have not been obtained may be subject to additional terms and conditions as required to effect coordination or obtain the agreement of other Administrations. Applicants and licensees shall also provide the Commission with the information required by Appendix 4 of the ITU Radio Regulations (RR) for advance publication and notification or coordination of the frequencies to be used for tracking, telemetry and control functions of DBS systems.

6. In § 25.113, revise paragraph (a) and remove and reserve paragraph (c) to read as follows:

§ 25.113 Station licenses and launch authority.

(a) Construction permits are not required for earth stations. Construction of such stations may commence prior to grant of a license at the applicant's own risk. Applicants must comply with the provisions of 47 CFR § 1.1312 relating to environmental processing prior to commencing construction.

* * * * *

(c) [removed and reserved].

7. In § 25.115, revise paragraph (a)(2), remove paragraph (a)(3), and redesignate current paragraph (a)(4) as paragraph (a)(3), to read as follows:

§ 25.115 Application for earth station authorizations.

(a)(1) * * *

(2) Applicants for licenses for transmitting earth station facilities are required to file Form 312EZ in the following cases:

(i) The earth station will operate in the 3700-4200 MHz and 5925-6425 MHz bands and/or in the 11.7-12.2 GHz and 14.0-14.5 GHz bands; and

(ii) The earth station will meet all the applicable technical specifications set forth in part 25

of this chapter.

(iii) The earth station is not an ESV.

(3) Applications for earth station authorizations must be filed in accordance with the pleading limitations, periods and other applicable provisions of §§ 1.41 through 1.52 of this chapter, except that such earth station applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter;

* * * * *

8. In § 25.116, revise paragraph (e) to read as follows:

§25.116 Amendments to applications.

* * * * *

(e) Any amendment to an application shall be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter. Amendments to space station applications must be filed on Form 312 and Schedule S. Amendments to earth station applications must be filed on Form 312 and Schedule B.

9. In § 25.117, revise paragraphs (b), (c), and (e) to read as follows:

§25.117 Modification of station licenses.

* * * * *

(b) Both earth station and space station modification applications must be filed electronically through the International Bureau Filing System (IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(c) Applications for modification of earth station authorizations shall be submitted on FCC Form 312, Main Form and Schedule B, but only those items that change need to be specified, provided that the applicant certifies that the remaining information has not changed.

* * * * *

(e) Any application for modification of authorization to extend a required date of completion, as set forth in § 25.133 for earth station authorizations or § 25.164 for space stations, or included as a condition of any earth station or space station authorization, must include a verified statement from the applicant:

(1) That states that the additional time is required due to unforeseeable circumstances beyond the applicant's control, describes these circumstances with specificity, and justifies the precise extension period requested; or

(2) That states there are unique and overriding public interest concerns that justify an extension, identifies these interests and justifies a precise extension period.

* * * * *

10. In § 25.119, revise paragraph (b)(2) to read as follows:

§ 25.119 Assignment or transfer of control of station authorization.

* * * * *

(b) * * *

(2) Effect any change in a controlling interest in the ownership of the licensee, including changes in legal or equitable ownership.

* * * * *

11. In § 25.134, revise the section heading, remove and reserve paragraph (d), and revise paragraph (h) to read as follows:

§ 25.134 Licensing provisions for Very Small Aperture Terminal (VSAT) and C-band Small Aperture Terminal (CSAT) networks.

* * * * *

(d) [Reserved]

* * * * *

(h) VSAT operators licensed pursuant to this section are prohibited from using remote earth stations in their networks that are not designed to stop transmission when synchronization with the signal received from the target satellite fails.

12. In § 25.137, revise paragraphs (b), (c), and (e) to read as follows:

§ 25.137 Application requirements for earth stations operating with non-U.S. licensed space stations.

* * * * *

(b) Earth station applicants, or entities filing a “letter of intent” or “Petition for Declaratory Ruling,” requesting authority to operate with a non-U.S.-licensed space station must attach to their FCC Form 312 exhibits providing legal and technical information for the non-U.S.-licensed space station in accordance with Part 25, including but not limited to Schedule S. Such applications, letters, or petitions must be filed electronically through the International Bureau Filing System.

(c) A non-U.S.-licensed NGSO-like satellite system seeking to serve the United States can be considered contemporaneously with other U.S. NGSO-like satellite systems pursuant to §25.157 and considered before later-filed applications of other U.S. satellite system operators, and a non-U.S.-licensed GSO-like satellite system seeking to serve the United States can have its request placed in a queue pursuant to §25.158 and considered before later-filed applications of other U.S. satellite system operators, if the non-U.S.-licensed satellite system:

- (1) Is in orbit and operating;
- (2) Has a license from another administration; or
- (3) Has been submitted for coordination to the International Telecommunication Union.

* * * * *

(e) A non-U.S.-licensed satellite operator that is seeking to serve the United States pursuant to a Letter of Intent may amend its request by submitting an additional Letter of Intent. Such additional Letters of Intent will be treated on the same basis as amendments filed by U.S. space station applicants for purposes of determining the order in which the Letters of Intent will be

considered relative to other pending applications.

* * * * *

13. In § 25.140, revise the section heading and paragraph (a) to read as follows:

§ 25.140 Qualifications of Fixed Satellite Service and 17/24 GHz broadcasting-satellite service space station licensees.

(a) License applications for new fixed-satellite space stations shall comply with the requirements established in Report and Order, CC Docket No. 81–704 (available at the address in § 0.445 of this chapter). Such applications must also meet the requirements in paragraph (b) of this section. The Commission may require additional or different information in the case of any individual application. Applications will be unacceptable for filing and will be returned to the applicant if they do not meet the requirements referred to in this paragraph.

* * * * *

14. In § 25.142, revise paragraphs (a)(2) and (b)(2)(ii) to read as follows:

§ 25.142 Licensing provisions for the non-voice, non-geostationary Mobile Satellite Service.

(a) * * *

(2) Applicants for a non-voice, non-geostationary Mobile Satellite space station license must identify the power flux density produced at the Earth's surface by each space station of their system in the 137-138 MHz and 400.15-401 MHz frequency bands, to allow determination of whether coordination with terrestrial services is required under any applicable footnote to the Table of Frequency Allocations in § 2.106 of this chapter. In addition, applicants must identify the measures they would employ to protect the radio astronomy service in the 150.05-153 MHz and 406.1-410 MHz bands from harmful interference from unwanted emissions.

* * * * *

(b) * * *

(2) * * *

(ii) The Commission will use its existing procedures for liaison with NTIA to reach agreement with respect to achieving compatible operations between Federal Government users under the jurisdiction of NTIA and non-voice, non-geostationary Mobile Satellite Service systems (including user transceivers subject to blanket licensing under §25.115(d)) through the frequency assignment and coordination practices established by NTIA and the Interdepartment Radio Advisory Committee (IRAC). In order to facilitate such frequency assignment and coordination, applicants shall provide the Commission with sufficient information to evaluate electromagnetic compatibility with the Federal Government use of the spectrum, and any additional information requested by the Commission. As part of the coordination process, applicants shall show that they will not cause unacceptable interference to authorized Federal Government users, based upon existing system information provided by the Government. The frequency assignment and coordination of the satellite system with Federal Government users shall be completed prior to grant of authorization.

* * * * *

15. In § 25.143, revise paragraph (e)(1)(iii) to read as follows:

§ 25.143 Licensing provisions for the 1.6/2.4 GHz Mobile Satellite Service and 2 GHz Mobile Satellite Service.

* * * * *

(e) * * *

(1) * * *

(iii) A detailed description of the use made of the in-orbit satellite system. That description should identify the percentage of time that the system is actually used for U.S. domestic transmission, the amount of capacity (if any) sold but not in service within U.S. territorial geographic areas, and the amount of unused system capacity. 2 GHz Mobile Satellite systems receiving expansion spectrum as part of the unserved areas spectrum incentive must provide a report on the actual number of subscriber minutes originating or terminating in unserved areas as a percentage of the actual U.S. system use; and

* * * * *

16. In § 25.145, revise paragraph (c)(1) to read as follows:

§ 25.145 Licensing conditions for the Fixed Satellite Service in the 20/30 GHz bands.

* * * * *

(c) * * *

(1) That the proposed system is capable of providing Fixed Satellite Services to all locations as far north as 70° North Latitude and as far south as 55° South Latitude for at least 75% of every 24-hour period; and

* * * * *

17. In § 25.146, revise the section heading; paragraphs (a)(1)(i), (a)(1)(iii), (a)(2)(i), and (a)(2)(iii); the introductory language to paragraph (b); and paragraphs (b)(1)(i), (b)(1)(iii), (e), (i)(2), and (i)(3) to read as follows:

§ 25.146 Licensing and operating rules for the non-geostationary satellite orbit Fixed Satellite Service (NGSO FSS) in the 10.7 GHz to 14.5 GHz bands.

(a) * * *

(1) * * *

(i) Provide a set of power flux density (PFD) masks, on the surface of the Earth, for each space station in the NGSO FSS system. The PFD masks shall be generated in accordance with the specification stipulated in the most recent version of ITU-R Recommendation BO.1503, "Functional Description to be used in Developing Software Tools for Determining Conformity of Non-GSO FSS Networks with Limits Contained in Article 22 of the Radio Regulations." In particular, the PFD masks must encompass the power flux density radiated by the space station regardless of the satellite transmitter power resource allocation and traffic/beam switching strategy that are used at different periods of an NGSO FSS system's life. The PFD masks shall be in an electronic form that can be accessed by the computer program specified in paragraph (a)(1)(iii) of this section.

(ii) * * *

(iii) If a computer program that has been approved by the ITU for determining compliance with the single-entry EPFD_{down} validation limits is not yet available, the applicant shall provide a computer program for the single-entry EPFD_{down} validation computation, including both the source code and the executable file. This computer program shall be developed in accordance with the specification stipulated in the most recent version of Recommendation ITU-R S.1503. If the applicant uses the ITU approved software, the applicant shall indicate the program name and the version used.

* * * * *

(2) * * *

(i) Provide a set of NGSO FSS earth station maximum equivalent isotropically radiated power (EIRP) masks as a function of the off-axis angle generated by an NGSO FSS earth station. The maximum EIRP mask shall be generated in accordance with the specification stipulated in the most recent version of ITU-R Recommendation BO.1503. In particular, the results of calculations encompass what would be radiated regardless of the earth station transmitter power resource allocation and traffic/beam switching strategy are used at different periods of an NGSO FSS system's life. The EIRP masks shall be in an electronic form that can be accessed by the computer program specified in paragraph (a)(2)(iii) of this section.

(ii) * * *

(iii) If a computer program that has been approved by the ITU for determining compliance with the single-entry EPFD_{up} validation limits is not yet available, the applicant shall provide a computer program for the single-entry EPFD_{up} validation computation, including both the source code and the executable file. This computer program shall be developed in accordance with the specification stipulated in the most recent version of Recommendation ITU-R S.1503. If the applicant uses the ITU approved software, the applicant shall indicate the program name and the version used.

* * * * *

(b) Ninety days prior to the initiation of service to the public, the NGSO FSS system licensee shall submit a comprehensive technical showing for the non-geostationary satellite orbit Fixed Satellite Service (NGSO FSS) system in the 10.7 GHz to 14.5 GHz bands. The technical information shall demonstrate that the NGSO FSS system is expected not to operate in excess of the additional operational EPFD_{down} limits and the operational EPFD_{down} limits as specified in §§ 25.208(i) and (j), and notes 2 and 3 to Table 1L in § 25.208(l). If the technical demonstration exceeds the additional operational EPFD_{down} limits or the operational EPFD_{down} limits at any test points with the United States for domestic service and at any test points outside of the United States for international service, the NGSO FSS system licensee shall not initiate service to the public until the deficiency has been rectified by reducing satellite transmission power or other adjustments. This must be substantiated by subsequent technical showings. The technical showings consist of the following:

(1) * * *

(i) Provide a set of anticipated operational power flux density (PFD) masks, on the surface of the Earth, for each space station in the NGSO FSS system. The anticipated operational PFD masks could be generated by using the method specified in the most recent version of ITU-R Recommendation BO.1503. In particular, the anticipated operational PFD mask shall take into account the expected maximum traffic loading distributions and geographic specific

scheduling of the actual measured space station antenna patterns (see § 25.210(k)). The anticipated operational PFD masks shall also be in an electronic form that can be accessed by the computer program contained in paragraph (b)(1)(iii) of this section.

(ii) * * *

(iii) Provide a computer program for the single-entry additional operational EPFD_{down} verification computation, including both the source code and the executable file. This computer program could be developed by using the method specified in the most recent version of ITU-R Recommendation BO.1503.

* * * * *

(e) An NGSO FSS system licensee operating a system in compliance with the limits specified in §25.208 (g), (i), (j), (k), (l), and (m) shall be considered as having fulfilled its obligations under ITU Radio Regulations Article 22.2 with respect to any GSO network. However, such NGSO FSS system shall not claim protection from GSO FSS and BSS networks operating in accordance with part 25 of this chapter and the ITU Radio Regulations.

* * * * *

(i) * * *

(2) A demonstration that the proposed system is capable of providing Fixed Satellite Services to all locations as far north as 70° North Latitude and as far south as 55° South Latitude for at least 75 percent of every 24-hour period; and

(3) Sufficient information on the NGSO FSS system characteristics to properly model the system in computer sharing simulations, including, at a minimum, NGSO hand-over and satellite switching strategies, NGSO satellite antenna gain patterns, and NGSO earth station antenna gain patterns. In particular, each NGSO FSS applicant must explain the switching protocols it uses to avoid transmitting while passing through the geostationary satellite orbit arc, or provide an explanation as to how the PFD limits in §25.208 are met without using geostationary satellite orbit arc avoidance. In addition, each NGSO FSS applicant must provide the orbital parameters contained in Section A.4 of Annex 2A to Appendix 4 of the ITU Radio Regulations (2008). Further, each NGSO FSS applicant must provide a sufficient technical showing to demonstrate that the proposed non-geostationary satellite orbit system meets the PFD limits contained in §25.208, as applicable, and

* * * * *

18. Amend § 25.150 to read as follows:

§ 25.150 Receipt of applications.

Applications received by the Commission are given a file number and a unique station identifier for administrative convenience. Neither the assignment of a file number and/or other identifier nor the listing of the application on public notice as received for filing indicates that the application has been found acceptable for filing or precludes subsequent return or dismissal of the application if it is found to be defective or not in accordance with the Commission's rules.

19. In § 25.201, remove the definitions of Active satellite, Base earth station, Passive satellite, Space operation service, Space telecommand, Space telemetry, Space tracking, and Structural attenuation; revise the definitions of Equivalent power flux density, Fixed earth station, Fixed Satellite Service, 2 GHz Mobile Satellite Service, Mobile Satellite Service, Power spectral

density, Protection areas, and Routine processing or licensing as follows; and add the following definitions for Feeder link, Ka-band, Mobile earth terminal, and 1.5/1.6 GHz Mobile Satellite Service.

§ 25.201 Definitions

1.5/1.6 GHz Mobile Satellite Service. Mobile Satellite Service provided in any portions of the 1525–1559 MHz downlink band and the 1626.5–1660.5 MHz uplink band, which are referred to in this rule part as the “1.5/1.6 GHz MSS bands.”

* * * * *

Equivalent power flux density. Equivalent power flux density (EPFD) is the sum of the power flux-densities produced at a geostationary satellite orbit (GSO) receive earth or space station on the Earth's surface or in the geostationary satellite orbit, as appropriate, by all the transmit stations within a non-geostationary satellite orbit Fixed Satellite Service (NGSO FSS) system, taking into account the off-axis discrimination of a reference receiving antenna assumed to be pointing in its nominal direction. The equivalent power flux density, in dB(W/m²) in the reference bandwidth, is calculated using the following formula:

$$EPFD = 10 \cdot \log_{10} \left[\sum_{i=1}^{N_a} 10^{\frac{P_i}{10}} \cdot \frac{G_t(\theta_i)}{4\pi d_i^2} \cdot \frac{G_r(\phi_i)}{G_{r,\max}} \right]$$

Where:

N_a is the number of transmit stations in the non-geostationary satellite orbit system that are visible from the GSO receive station considered on the Earth's surface or in the geostationary satellite orbit, as appropriate;

i is the index of the transmit station considered in the non-geostationary satellite orbit system;

P_i is the RF power at the input of the antenna of the transmit station, considered in the non-geostationary satellite orbit system in dBW in the reference bandwidth;

θ_i is the off-axis angle between the boresight of the transmit station considered in the non-geostationary satellite orbit system and the direction of the GSO receive station;

$G_t(\theta_i)$ is the transmit antenna gain (as a ratio) of the station considered in the non-geostationary satellite orbit system in the direction of the GSO receive station;

d_i is the distance in meters between the transmit station considered in the non-geostationary satellite orbit system and the GSO receive station;

Φ_i is the off-axis angle between the boresight of the antenna of the GSO receive station and the direction of the i th transmit station considered in the non-geostationary satellite orbit system;

$G_r(\Phi_i)$ is the receive antenna gain (as a ratio) of the GSO receive station in the direction of the i th transmit station considered in the non-geostationary satellite orbit system;

$G_{r,\max}$ is the maximum gain (as a ratio) of the antenna of the GSO receive station.

Feeder link. A radio link from a fixed earth station to a space station, or vice versa, conveying information for a space radio-communication service other than the Fixed Satellite Service.

Fixed earth station. An earth station intended to be used at a fixed position. The position may be a specified fixed point or any fixed point within a specified area.

Fixed Satellite Service. A radiocommunication service between fixed earth stations when one or more satellites are used. The Fixed Satellite Service also includes feeder links for other space radiocommunication services.

* * * * *

2 GHz Mobile Satellite Service. A Mobile Satellite Service that is operated in the 2000-2020 MHz and 2180-2200 MHz frequency bands, or in any portion thereof.

* * * * *

Mobile Earth Terminal (MET). Mobile earth station.

Mobile Satellite Service (MSS). A radiocommunication service:

(1) Between mobile earth stations and one or more space stations, or between space stations used by this service; or

(2) Between mobile earth stations, by means of one or more space stations. (RR)

* * * * *

Power spectral density. The amount of an emission's transmitted carrier power applied at the antenna input falling within the stated bandwidth. The units of power spectral density are watts per hertz and are generally expressed in decibel form as dB(W/Hz) when measured in a 1 Hz bandwidth, dB(W/4kHz) when measured in a 4 kHz bandwidth, or dB(W/1MHz) when measured in a 1 MHz bandwidth.

Protection areas. The geographic regions on the surface of the Earth where U.S. Department of Defense meteorological satellite systems or National Oceanic and Atmospheric Administration meteorological satellite systems, or both such systems, are receiving signals from low earth orbiting satellites. Also, geographic areas around Ka-band feeder-link earth stations in the 1.6/2.4 GHz Mobile Satellite Service are determined in the manner specified in Section 25.203(j) of this Chapter.

* * * * *

Routine processing or licensing. A licensing process whereby applications are processed in an expedited manner. To be eligible for routine processing, an application must be complete in all regards, must be consistent with all Commission Rules, and must not raise any policy issues. With respect to fixed earth station licensing (including temporary fixed stations), an application is "routine" only if it is for an individual earth station that conforms to all applicable provisions of the Commission's rules pertaining to antenna performance, power, frequency coordination, radiation hazard, and FAA notification, and accesses only "Permitted Space Station List" satellites in the conventional C-band or Ku-band frequency bands.

20. In § 25.202, revise paragraphs (a)(1) and (a)(4)(iii)(A) to read as follows:

§ 25.202 Frequencies, frequency tolerance and emission limitations.

(a)(1) *Frequency band.* The following frequencies are available for use by the Fixed Satellite Service. Precise frequencies and bandwidths of emission shall be assigned on a case-by-case basis. The Table follows:

Space-to-Earth (GHz)	Earth-to-space (GHz)
3.65-3.7 ¹⁷	5.925-6.425 ¹
3.7-4.2 ¹	12.75-13.25 ^{1, 12, 14}
10.7-10.95 ^{1, 2, 12}	13.75-14 ^{4, 12}
10.95-11.2 ^{1, 2, 12}	14-14.2 ⁵
11.2-11.45 ^{1, 2, 12}	14.2-14.5

11.45-11.7 ^{1, 2, 12}	17.3-17.8 ⁹
11.7-12.2 ³	27.5-28.35 ²⁴
12.2-12.7 ¹³	28.35-28.6 ^{19, 23}
18.3-18.58 ^{10, 24}	28.6-29.1 ^{20, 23}
18.58-18.8 ^{6, 10, 11}	29.1-29.25 ^{21, 23}
18.8-19.3 ^{7, 10}	29.25-29.5 ^{22, 23}
19.3-19.7 ^{8, 10}	29.5-30.0 ¹⁹
19.7-20.2 ¹⁰	47.2-50.2 ¹
24.75-25.05 ¹⁸	
25.05-25.25 ^{1, 18}	
37.5-40 ^{15, 16}	
37.6-38.6	
40-42 ¹⁶	

¹ This band is shared coequally with terrestrial radiocommunication services.

² Use of this band by geostationary satellite orbit satellite systems in the Fixed Satellite Service is limited to international systems, *i.e.*, other than domestic systems.

³ Fixed-satellite transponders may be used additionally for transmissions in the broadcasting-satellite service.

⁴ This band is shared on an equal basis with the Government radiolocation service and grandfathered space stations in the Tracking and Data Relay Satellite System.

⁵ In this band, stations in the radionavigation service shall operate on a secondary basis to the Fixed Satellite Service.

⁶ The band 18.58-18.8 GHz is shared co-equally with existing terrestrial radiocommunication systems until June 8, 2010.

⁷ The band 18.8-19.3 GHz is shared co-equally with terrestrial radiocommunication services, until June 8, 2010. After this date, the sub-band 19.26-19.3 GHz is shared co-equally with existing terrestrial radiocommunication systems.

⁸ The use of the band 19.3-19.7 GHz by the Fixed Satellite Service (space-to-Earth) is limited to feeder links for the Mobile Satellite Service.

⁹ The use of the band 17.3-17.8 GHz by the Fixed Satellite Service (Earth-to-space) is limited to feeder links for broadcasting-satellite service, and the sub-band 17.7-17.8 GHz is shared co-equally with terrestrial fixed services.

¹⁰ This band is shared co-equally with the Federal Government Fixed Satellite Service.

¹¹ The band 18.6-18.8 GHz is shared co-equally with the non-Federal Government and Federal Government Earth exploration-satellite (passive) and space research (passive) services.

¹² Use of this band by non-geostationary satellite orbit systems in the Fixed Satellite Service is limited to gateway earth station operations.

¹³ Use of this band by the Fixed Satellite Service is limited to non-geostationary satellite orbit systems.

¹⁴ Use of this band by NGSO FSS gateway earth station uplink operations is subject to the provisions of § 2.106 NG53.

¹⁵ Use of this band by the Fixed Satellite Service is limited to gateway earth station operations, provided the licensee under this Part obtains a license under Part 101 of this Chapter or an agreement from a Part 101 licensee for the area in which an earth station is to be located. Satellite earth station facilities in this band may not be ubiquitously deployed and may not be used to serve individual consumers.

¹⁶ The 37.5-40.0 GHz band is designated as being available for use by the fixed and mobile services and the 40.0-42.0 GHz band is designated as being available for use by the Fixed Satellite Service.

¹⁷ FSS earth stations in this band must operate on a secondary basis to terrestrial

radiocommunication services, except that the band is shared co-equally between certain grandfathered earth stations and the terrestrial radiocommunication services.

¹⁸ Use of the 24.7-25.25 GHz band by the Fixed Satellite Service (Earth-to-space) is limited to feeder links for the broadcasting satellite service, and the 25.05-25.25 GHz sub-band is shared co-equally with terrestrial fixed services.

¹⁹ This band is primary for GSO FSS and secondary for NGSO FSS.

²⁰ This band is primary for NGSO FSS and secondary for GSO FSS.

²¹ This band is primary for MSS feeder links and LMDS hub-to-subscriber transmission.

²² This band is primary for MSS feeder links and GSO FSS.

²³ This band is internationally allocated for FSS and terrestrial radio services on a co-primary basis.

²⁴ FSS is secondary to LMDS in this band.

²⁵ The band 18.3-18.58 GHz is shared co-equally with existing terrestrial radiocommunication systems until November 19, 2012.

* * * * *

(4) * * *

(iii)(A) The following frequencies are available for use by the 1.5/1.6 GHz Mobile Satellite Service:

1525-1559 MHz: space-to-Earth

1626.5-1660.5 MHz: Earth-to-space

* * * * *

21. In § 25.203, revise paragraphs (g)(2) and (g)(4) to read as follows:

§ 25.203 Choice of sites and frequencies.

* * * * *

(g) * * *

(2) In the event that the calculated value of the expected field strength exceeds 10 mV/m (-65.8 dBW/m^2) at the reference coordinates, or if there is any question whether field strength levels might exceed the threshold value, advance consultation with the FCC to discuss any protection necessary should be considered. See Section 0.401 of this chapter for contact information.

* * * * *

(4) Advance coordination for stations operating above 1000 MHz is recommended only where the proposed station is in the vicinity of a monitoring station designated as a satellite monitoring facility in §0.121(c) of the Commission's Rules and also meets the criteria outlined in paragraphs (g)(2) and (3) of this section.

* * * * *

22. In § 25.208, revise the introductory language of paragraph (s) to read as follows:

§ 25.208 Power flux density limits

* * * * *

(s) In the 40.0-40.5 GHz band, the power flux density at the Earth's surface produced by

emissions from a space station for all conditions and for all methods of modulation shall not exceed the following values:

* * * * *

23. In § 25.209, revise the caption to read as follows:

§ 25.209 Earth station antenna performance standards.

* * * * *

24. In § 25.210, remove and reserve paragraph (d) and revise paragraph (f) and the introductory language of paragraph (k) to read as follows:

§ 25.210 Technical requirements for space stations in the Fixed Satellite Service.

* * * * *

(d) [Reserved]

* * * * *

(f) All space station operation in any Fixed Satellite Service frequency band, including feeder links for other space services, and in the Broadcasting-Satellite Service in the 17.3-17.8 GHz band (space-to-Earth), shall employ state-of-the-art full frequency reuse, either through the use of orthogonal polarizations within the same beam and/or the use of spatially independent beams.

* * * * *

(k) Antenna measurements of both co-polarized and cross-polarized performance must be made on all antennas employed by space stations both within and outside the primary coverage area. The results of such measurements shall be submitted to the Commission within thirty days after preliminary in-orbit testing is completed.

25. In § 25.211, revise paragraph (e) to read as follows:

§ 25.211 Analog video transmissions in the Fixed Satellite Services.

* * * * *

(e) Antennas smaller than those specified in paragraph (d) of this section are subject to the provisions of § 25.220. These antennas will not be routinely licensed for transmission of full transponder services.

* * * * *

26. Amend Section 25.212 by revising the title and paragraphs (c), (d)(2), (d)(3), and (e), to read as follows:

§ 25.212 Narrowband analog transmissions and all digital transmissions in the GSO Fixed Satellite Service.

* * * * *

(c)(1) In the 14.0-14.5 GHz band, an earth station with an antenna equivalent diameter of 1.2 meters or greater may be routinely licensed for transmission of narrowband analog services with bandwidths up to 200 kHz if the maximum input power spectral density into the antenna does not exceed -8 dBW/4 kHz and the maximum transmitted satellite carrier EIRP density does not exceed 17 dBW/4 kHz.

(2) In the 14.0-14.5 GHz band, an earth station with an antenna equivalent diameter of 1.2 meters or greater may be routinely licensed for transmission of narrowband and/or wideband digital services, including digital video services, if the maximum input spectral power density into the antenna does not exceed -14 dBW/4 kHz, and the maximum transmitted satellite carrier EIRP density does not exceed +10.0 dBW/4 kHz.

(3) Antennas transmitting in the 14.0-14.5 GHz band with a major and/or minor axis smaller than 1.2 meters are subject to the provisions of either § 25.218 or §25.220 of this chapter.

(d) * * *

(2) For earth stations licensed after March 10, 2005 in the 5925-6425 MHz band, an earth station with an equivalent diameter of 4.5 meters or greater may be routinely licensed for transmission of SCPC services if the maximum power densities into the antenna do not exceed +0.5 dBW/4 kHz for analog SCPC carriers with bandwidths up to 200 kHz, and do not exceed $-2.7 - 10\log(N)$ dBW/4 kHz for digital SCPC carriers. For digital SCPC using a frequency division multiple access (FDMA) or time division multiple access (TDMA) technique, N is equal to one. For digital SCPC using a code division multiple access (CDMA) technique, N is the maximum number of co-frequency simultaneously transmitting earth stations in the same satellite receiving beam.

(3) Antennas with an equivalent diameter smaller than 4.5 meters in the 5925-6425 MHz band are subject to the provisions of either § 25.218 or § 25.220 of this chapter.

(e) Each applicant for authorization for transmissions in the Fixed Satellite Service proposing to use transmitted satellite carrier EIRP densities, and/or maximum antenna input power densities in excess of those specified in paragraph (c) of this section in the 14.0-14.5 GHz band, or in paragraph (d) of this section in the 5925-6425 MHz band, respectively, must comply with either the procedures set forth in either § 25.218 or § 25.220 of this chapter.

* * * * *

27. In § 25.214, revise paragraph (a)(2) to read as follows:

§ 25.214 Technical requirements for space stations in the satellite digital audio radio service.

(a) * * *

(2) *Frequency Assignment.* The term “frequency assignment” refers to the authorization given by the Commission for a radio station to use a radio frequency or radio frequency channel under specified conditions. This term shall be applied to the two frequency bands (A) 2320.0-2332.5 MHz and (B) 2332.5-2345.0 MHz for satellite DARS.

* * * * *

28. Amend § 25.218 by revising paragraph (a) to read as follows:

§ 25.218 Off-Axis EIRP Envelopes for FSS earth station operations.

(a) This section applies to all applications for FSS earth stations operating in the C-band, Ku-band, or extended Ku-band, except for

- (1) ESV applications,
- (2) Analog video earth station applications, and
- (3) Applications for feeder-link earth stations in the 17/24 GHz BSS.

29. Amend § 25.221 by revising paragraph (b)(1)(ii) to read as follows:

§ 25.221 Blanket Licensing provisions for Earth Stations on Vessels (ESVs) receiving in the 3700-4200 MHz (space-to-Earth) frequency band and transmitting in the 5925-6425 MHz (Earth-to-space) frequency band, operating with Geostationary Satellite Orbit (GSO) Satellites in the Fixed Satellite Service.

* * * * *

(b) * * *

(1) * * *

(ii) A certification, in Schedule B, that the ESV antenna conforms to the gain pattern criteria of § 25.209(a) and (b), that, combined with the maximum input power density calculated from the EIRP density less the antenna gain, which is entered in Schedule B, demonstrates that the off-axis EIRP spectral density envelope set forth in paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section will be met under the assumption that the antenna is pointed at the target satellite. If an antenna proposed for use by the applicant does not comply with the antenna performance standards contained in § 25.209(a) and (b), the applicant must provide, as an exhibit to its application, the antenna gain patterns specified in § 25.132(b).

* * * * *

30. Amend § 25.222 by revising paragraph (b)(1)(ii) to read as follows:

§ 25.222 Blanket Licensing provisions for Earth Stations on Vessels (ESVs) receiving in the 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth), 11.7-12.2 GHz (space-to-Earth) frequency bands and transmitting in the 14.0-14.5 GHz (Earth-to-space) frequency band, operating with Geostationary Orbit (GSO) Satellites in the Fixed Satellite Service.

* * * * *

(b) * * *

(1) * * *

(ii) A certification, in Schedule B, that the ESV antenna conforms to the gain pattern criteria of §§ 25.209(a) and (b), that, combined with the maximum input

power density calculated from the EIRP density less the antenna gain, which is entered in Schedule B, demonstrates that the off-axis EIRP spectral density envelope set forth in paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section will be met under the assumption that the antenna is pointed at the target satellite. If an antenna proposed for use by the applicant does not comply with the antenna performance standards contained in §§ 25.209(a) and (b), the applicant must provide, as an exhibit to its application, the antenna gain patterns specified in § 25.132(b).

* * * * *

31. Amend § 25.226 by revising paragraph (b)(1)(ii) to read as follows:

§ 25.226 Blanket Licensing provisions for domestic, U.S. Vehicle-Mounted Earth Stations (VMESs) receiving in the 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth), and 11.7-12.2 GHz (space-to-Earth) frequency bands and transmitting in the 14.0-14.5 GHz (Earth-to-space) frequency band, operating with Geostationary Satellites in the Fixed Satellite Service.

* * * * *

(b) * * *

(1) * * *

(ii) A VMES applicant shall include a certification, in Schedule B, that the VMES antenna conforms to the gain pattern criteria of §§ 25.209(a) and (b), that, combined with the maximum input power density calculated from the EIRP density less the antenna gain, which is entered in Schedule B, demonstrates that the off-axis EIRP spectral density envelope set forth in paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section will be met under the assumption that the antenna is pointed at the target satellite. If an antenna proposed for use by the applicant does not comply with the antenna performance standards contained in §§ 25.209(a) and (b), the applicant must provide, as an exhibit to its application, the antenna gain patterns specified in § 25.132(b).

* * * * *

32. In § 25.251, revise paragraph (b) to read as follows:

§ 25.251 Special requirements for coordination.

* * * * *

(b) The technical aspects of coordination are based on Appendix 7 of the International Telecommunication Union Radio Regulations and certain recommendations of the ITU Radiocommunication Sector (available at the address in § 0.445 of this chapter).

33. In § 25.259, revise paragraph (a) to read as follows:

§ 25.259 Time sharing between NOAA meteorological satellite systems and non-voice, non-geostationary satellite systems in the 137-138 MHz band.

(a) The space stations of a non-voice, non-geostationary Mobile Satellite Service (NVNG MSS) system time-sharing downlink spectrum in the 137-138 MHz frequency band with National Oceanic and Atmospheric Administration (NOAA) satellites shall not transmit signals into the “protection areas” of the NOAA satellites.

(1) With respect to transmission in the 137.333-137.367 MHz, 137.485-137.515 MHz, 137.605-137.635 MHz, and 137.753-137.787 MHz bands, the protection area for a NOAA satellite is the area on the Earth’s surface in which the NOAA satellite is in line of sight from the ground at an elevation angle of five degrees or more above the horizon. No NVNG MSS satellite shall transmit in these bands when it is in line of sight at an elevation angle of zero degrees or more from any point on the ground within a NOAA satellite’s protected area for that band.

(2) With respect to transmission in the 137.025-137.175 MHz and 137.825-138 MHz bands, the protection area for a NOAA satellite is the area on the Earth’s surface in which the NOAA satellite is in line of sight from the ground at any elevation angle above zero degrees. No NVNG MSS satellite shall transmit in these bands when at a line-of-sight elevation angle of zero degrees or more from any point on the ground within a NOAA satellite’s protected area for that band. In addition, such an NVNG MSS satellite shall cease transmitting when it is at an elevation angle of less than zero degrees from any such point, if reasonably necessary to protect reception of the NOAA satellite’s signal.

(3) An NVNG MSS licensee is responsible for obtaining the ephemeris data necessary for compliance with these restrictions. The ephemeris information must be updated system-wide on at least a weekly basis. For calculation required for compliance with these restrictions an NVNG MSS licensee shall use an orbital propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by NOAA.

* * * * *

34. In § 25.260, revise paragraph (a) to read as follows:

§ 25.260 Time sharing between DoD meteorological satellite systems and non-voice, non-geostationary satellite systems in the 400.15-401 MHz band.

(a) The space stations of a non-voice, non-geostationary Mobile Satellite Service (NVNG MSS) system time-sharing downlink spectrum in the 400.15-401.0 MHz band with Department of Defense (DoD) satellites shall not transmit signals into the “protection areas” of the DoD satellites.

(1) The protection area for such a DoD satellite is the area on the Earth’s surface in which the DoD satellite is in line of sight from the ground at an elevation angle of five degrees or more above the horizon.

(2) An NVNG MSS space station shall not transmit in the 400.15–401 MHz band when at a line-of-sight elevation angle of zero degrees or more from any point on the ground within the protected area of a DoD satellite operating in that band.

(3) An NVNG MSS licensee is responsible for obtaining the ephemeris data necessary for compliance with this restriction. The ephemeris information must be updated system-wide at least once per week. For calculation required for compliance with this restriction an NVNG MSS licensee shall use an orbital propagator algorithm with an accuracy equal to or greater than the NORAD propagator used by DoD.

* * * * *

35. In § 25.271, revise paragraphs (c)(1) and (c)(3) to read as follows:

§ 25.271 Control of transmitting stations.

* * * * *

(c) * * *

(1) The parameters of the transmissions of the remote station monitored at the control point, and the operational functions of the remote earth stations that can be controlled by the operator at the control point, are sufficient to ensure that the operations of the remote station(s) are at all times in full compliance with the remote station authorization(s);

(2) * * *

(3) Upon detection by the licensee, or upon notification from the Commission of a deviation or upon notification by another licensee of harmful interference, the operation of the remote station shall be immediately suspended by the operator at the control point until the deviation or interference is corrected, except that transmissions concerning the immediate safety of life or property may be conducted for the duration of the emergency; and

* * * * *

36. In § 25.272, revise paragraph (a) to read as follows:

§ 25.272 General inter-system coordination procedures.

(a) Each space station licensee in the Fixed Satellite Service shall establish a satellite network control center which will have the responsibility to do the following:

(1) monitor space-to-Earth transmissions in its system (thus indirectly monitoring uplink earth station transmissions in its system) and

(2) coordinate transmissions in its satellite system with those of other systems to prevent harmful interference incidents or, in the event of a harmful interference incident, to identify the source of the interference and correct the problem promptly.

* * * * *

37. In § 25.273, revise paragraph (a)(2) to read as follows:

§ 25.273 Duties regarding space communication transmissions.

(a) * * *

(2) Conduct transmissions over a transponder unless the operator is authorized to transmit at that time by the satellite licensee or the satellite licensee's successor in interest; or

* * * * *

38. In § 25.274, revise paragraph (b) to read as follows:

§ 25.274 Procedures to be followed in the event of harmful interference.

* * * * *

(b) The earth station operator shall then check all other earth stations in the licensee's network that could be causing the harmful interference to ensure that none of them is the source of the

interference and to verify that the interference is not from a local terrestrial source.

* * * * *

39. In § 25.276, revise paragraph (c) to read as follows:

§ 25.276 Points of communication.

* * * * *

(c) Transmission to or from foreign points over space stations in the Fixed Satellite Service are subject to the requirements set forth in § 25.137 of this Chapter.

* * * * *

40. In § 25.283, revise paragraph (a) to read as follows:

§ 25.283 End-of-life disposal.

(a) Geostationary orbit space stations. Unless otherwise explicitly specified in an authorization, a space station authorized to operate in the geostationary satellite orbit under this part shall be relocated, at the end of its useful life, barring catastrophic failure of satellite components, to an orbit with a perigee with an altitude of no less than:

$$36,021 \text{ km} + (1000 \cdot C_R \cdot A/m)$$

where C_R is the solar radiation pressure coefficient of the spacecraft, and A/m is the Area to mass ratio, in square meters per kilogram, of the spacecraft.

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